

Notice of Allowability

Application No.

10/534,049

Examiner

ANH PHUNG

Applicant(s)

SEKIGUCHI ET AL.

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Election received on Nov. 20, 2006.
2. ☒ The allowed claim(s) is/are 1 and 16-33.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☒ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 5/6/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☒ Other Search History.


ANH PHUNG
PRIMARY EXAMINER

OFFICE ACTION

Examiner's amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CAR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

In the claims:

Cancel non-elected claims **34** and **35** due to the Election without traverse on Nov. 20, 2006.

The examiner's amendment has been made in order to place the application in a condition for allowance.

2. This Office Action is responsive to the Election received on Nov. 20, 2006, the non-elected claims **34** and **35** are canceled and elected claims **1** and **16-33** are remained in the present application.

Information Disclosure Statement

3. This office acknowledges receipt of the following items from the Applicant:
Information Disclosure Statements (IDS) filed on May 6, 2005.
Information disclosed and listed on PTO 1449 was considered.

Drawings

4. Figure **23** should be designated by a legend such as --**Prior Art**-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid

abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Examiner's Statement of Reasons for Allowance

5. Claims 1 and 16-33 are allowed.

Do et al. (US 2006/0092735), Won (US 7,068,528), Takashima et al. (US 6,147,918) and Fujii et al. (US 5,274,598) disclose a semiconductor memory device having an amplifier circuit similar to that of the present application, but fail to teach:

"in a first state, potentials of said first and second IO lines included in said first region are higher than a potential of the source line included in said first region, and the first and second IO lines included in said second region and the source line are equal in potential, and in said first state, information is read from the memory cell included in said first region" as claimed in the independent claim 1; dependent claims 17, 19, 21, 23, 25 and 27 are therefore allowed because of their dependency on claim 1; or

"in a first state, potentials of said first and second IO lines included in said first region are higher than a potential of the source line included in said first region, potentials of said first and second IO lines included in said second region and a potential of the source line are equal to an absolute value of a value obtained by subtracting a threshold voltage of said first and second MOS transistors from a potential of said first and second bit lines, and in said first state, information is read from the

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memory cell included in said first region” as claimed in the independent claim **16**; dependent claims **18, 20, 22, 24, 26** and **28** are therefore allowed because of their dependency on claim **16**; or

“wherein said amplifier circuit includes first to fourth MOS transistors, gates of said first and second MOS transistors receives an input of said selecting means, and sources of said first and second MOS transistors are connected to said source line, a drain of said third MOS transistor is connected to said first IO line, and a drain of said fourth MOS transistor is connected to said second IO line, each gate of said third and fourth MOS transistors included in said amplifier circuit is connected to said column select line in common, a drain of said first MOS transistor is connected to a source of said third MOS transistor, a drain of said second MOS transistor is connected to a source of said fourth MOS transistor, and signals of said plurality of bit line pairs are inputted to said selecting means” as claimed in the independent claim **29**; dependent claims **30-32** are therefore allowed because of their dependency on claim **29**; or

“in a first state, said first and second read column select lines are activated, and potentials of said first and second IO line pairs included in said first region are higher than a potential of the source line included in said first region, and the first and second IO line pairs included in said second region and the source line are equal in potential, or potentials of the first and second IO lines included in said second region and a potential of said source line is equal to an absolute value of a value obtained by subtracting a threshold voltage of said first and second MOS transistors from a potential of said first and second bit lines” as claimed in the independent claim **33**.

Any comments considered necessary by applicants must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comment on Statement of Reasons for Allowance".

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **ANH PHUNG** whose telephone number is **(571) 272-1883**. The examiner can normally be reached on Monday-Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **RICHARD ELMS**, can be reached on **(571) 272-1869**. The fax phone number for the organization where this application or proceeding is assigned is **(571) 273-8700**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866-217-9197** (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call **800-786-9199** (IN USA OR CANADA) or **571-272-1000**.

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AKP

A handwritten signature in black ink, appearing to read "Anh Phung". The signature is fluid and cursive, with the first name "Anh" and last name "Phung" clearly distinguishable.

ANH PHUNG
PRIMARY EXAMINER